C6173
Log Data Report

Borehole Information:

Borehole:	C6173		Site:	100-B-27	
Coordinates (WA St Plane)		GWL[1] (ft):	46.5	GWL Date:	02/05/08
North (m)	East (m)	Drill Date	TOC Elevation	Total Depth (ft)	Type
Unknown	Unknown	02/06/08	Unknown	58 ft	Direct Push

Casing Information:

Casing Type	Stickup (ft)	Outer Diameter (in.)	Inside Diameter (in.)	Thickness (in.)	Top (ft)	Bottom (ft)
Threaded Steel	2.8	8 5/8	7 3/4	9/16	2.8	57

Borehole Notes:

Logger measured casing using a steel tape and rounding to the nearest 1/16-in. Zero reference is the top of the ground. This borehole was drilled by FH for WCH in the 100 B Area.

Logging Equipment Information:

Logging System:	Gamma 4 N		Type:	SGLS HpGe (60%)
			Serial No.:	45TP22010A
Effective Calibration Date:	09/20/07	Calibration Reference:	HGLP-CC-022, Rev. 1	
		Logging Procedure:	HGLP-MAN-002, Rev. 0	

Logging System:	Gamma 4 H		Type:	NMLS
			Serial No.:	H310700352
Effective Calibration Date:	11/06/07	Calibration Reference:	HGLP-CC-021	
		Logging Procedure:	HGLP-MAN-002, Rev. 0	

Spectral Gamma Logging System (SGLS) Log Run Information:

Log Run	1	2 Repeat		
Date	02/06/08	02/06/08		
Logging Engineer	Pearson	Pearson		
Start Depth (ft)	57.0	13.0		
Finish Depth (ft)	0.0	7.0		
Count Time (sec)	100	100		
Live/Real	R	R		
Shield (Y/N)	N	N		
MSA Interval (ft)	1.0	1.0		
ft/min	N/A	N/A		
Pre-Verification	DN951CAB	DN951CAB		
Start File	DN951000	DN951058		
Finish File	DN951057	DN951064		
Post-Verification	DN951CAA	DN951CAA		
Depth Return Error (in.)	0.0	0.0		
Comments	No fine gain adjustments made.	Repeat section.		

Neutron Moisture Logging System (NMLS) Log Run Information:

Log Run	3	4 Repeat		
Date	02/06/08	02/06/08		
Logging Engineer	Pearson	Pearson		
Start Depth (ft)	0.0	46.0		
Finish Depth (ft)	46.5	41.0		
Count Time (sec)	15	15		
Live/Real	R	R		
Shield (Y/N)	N	N		
MSA Interval (ft)	0.25	0.25		
ft/min	N/A	N/A		
Pre-Verification	DHA92CAB	DHA92CAB		
Start File	DHA92000	DHA92187		
Finish File	DHA92186	DHA92207		
Post-Verification	DHA92CAA	DHA92CAA		
Depth Return Error (in.)	N/A	1.0 high		
Comments	None.	Repeat section.		

Logging Operation Notes:

Data were collected using Gamma 4, HO 68B-3573. SGLS pre- and post-survey verification measurements were acquired in the Amersham KUTh-115 field verifier. Maximum logging depth achieved was 57.4 ft before sonde un-weighted. NMLS pre- and post-survey verification measurements were acquired in the standard field verifier.

Analysis Notes:

Analyst:	LEGLER	Date:	03/12/08	Reference:	GJO-HGLP 1.6.3, Rev. 0

The SGLS pre- and post-survey verification spectra met the acceptance criteria for the established system, but the full width half maximum had measurements greater than the upper control limit for the 609 keV, and 1461 keV energy lines for both pre- and post-survey verification spectra and DN951CAB had a measurement below the lower control limit for the 1461 keV energy line.

The NMLS pre- and post-survey verification spectra met the acceptance criteria for the established system, but both verification spectra had measurements above the upper control limits for counts per second (cps).

A casing correction for a 9/16-in thick casing was applied during analysis. A water correction was also applied during analysis from 46.5 ft to total logged depth of borehole.

SGLS spectra were processed in batch mode in APTEC SUPERVISOR to identify individual peaks and count rates. Concentrations for SGLS were calculated using an EXCEL template identified as G4Nsept07.xls using an efficiency function and corrections for casing, dead time, and water as determined by annual calibrations.

NMLS spectra were processed in batch mode in APTEC SUPERVISOR to identify count rates. NMLS count rates were calculated using an EXCEL template identified as G4Hnov07.xls. NMLS data are presented in cps, because there are no calibration data available for 7-3/4-in. borehole casing.

Results and Interpretations:

The only manmade radionuclide detected was Cs-137, which was detected at 9 ft near the MDL. Inspection of the individual spectrum of this detection indicated a statistical fluctuation and is not considered valid.

Repeat SGLS and NMLS log sections showed good repeatability, suggesting that the logging systems were operating properly.

List of Log Plots:

Depth Reference is top of Ground Surface

Man-made Radionuclides
Natural Gamma Logs
Combination Plot
Total Gamma & Dead Time
Total Gamma & Moisture
Repeat Section of Natural Gamma Logs
Repeat Section of Moisture

[1] GWL – groundwater level

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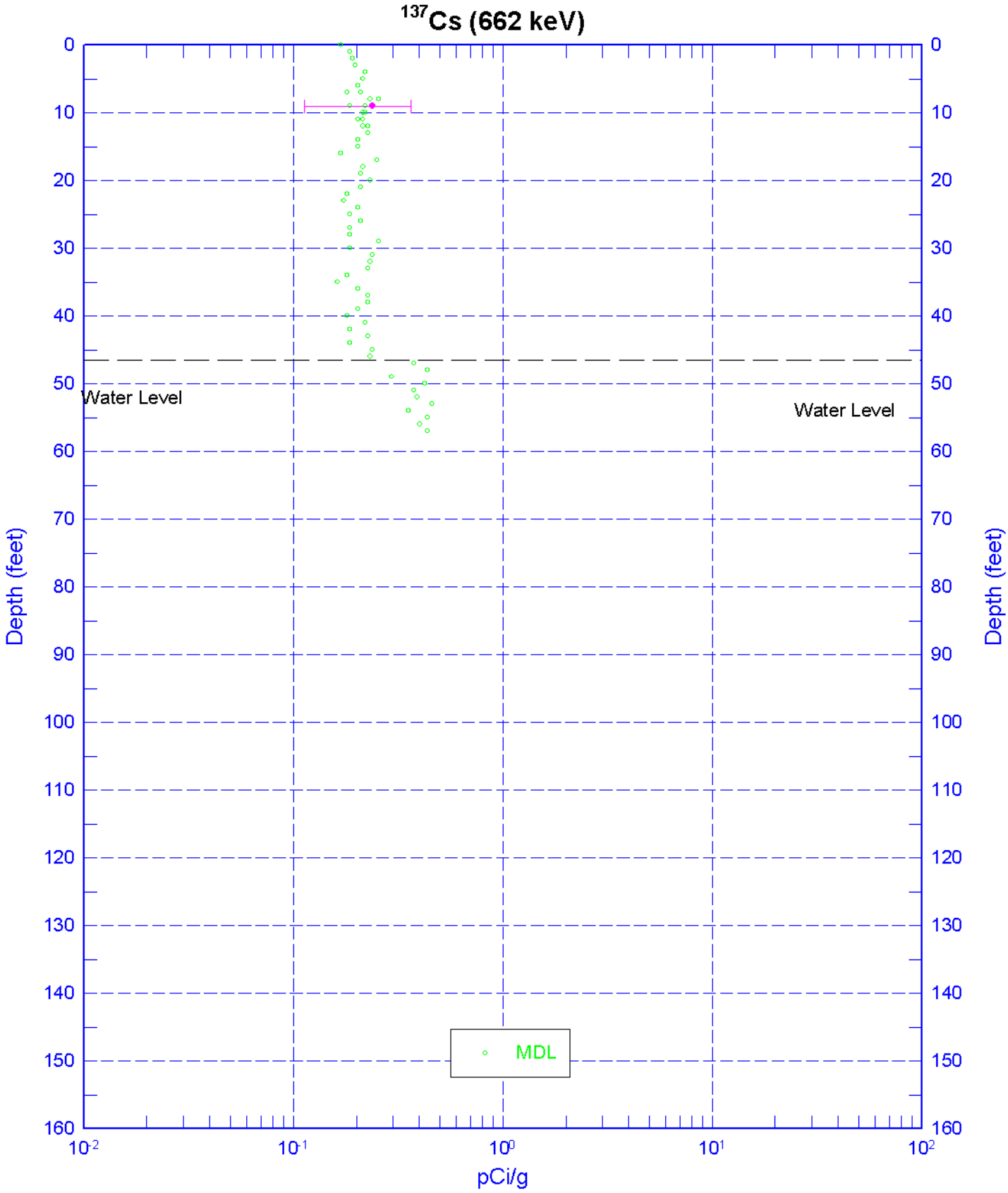
Manmade Radionuclides



Zero Reference - Ground Surface

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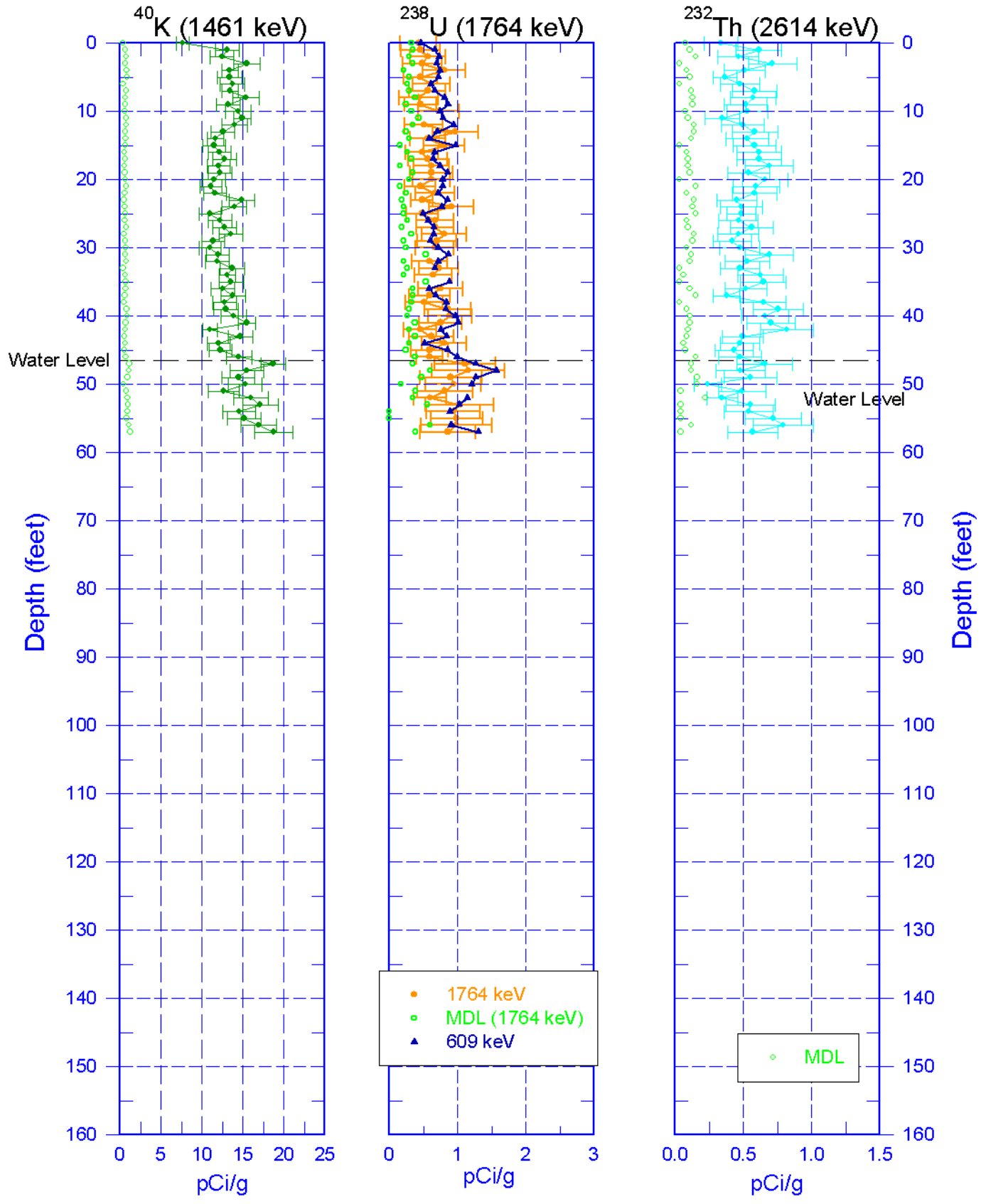
C6173
Natural Gamma Logs



Zero Reference - Ground Surface

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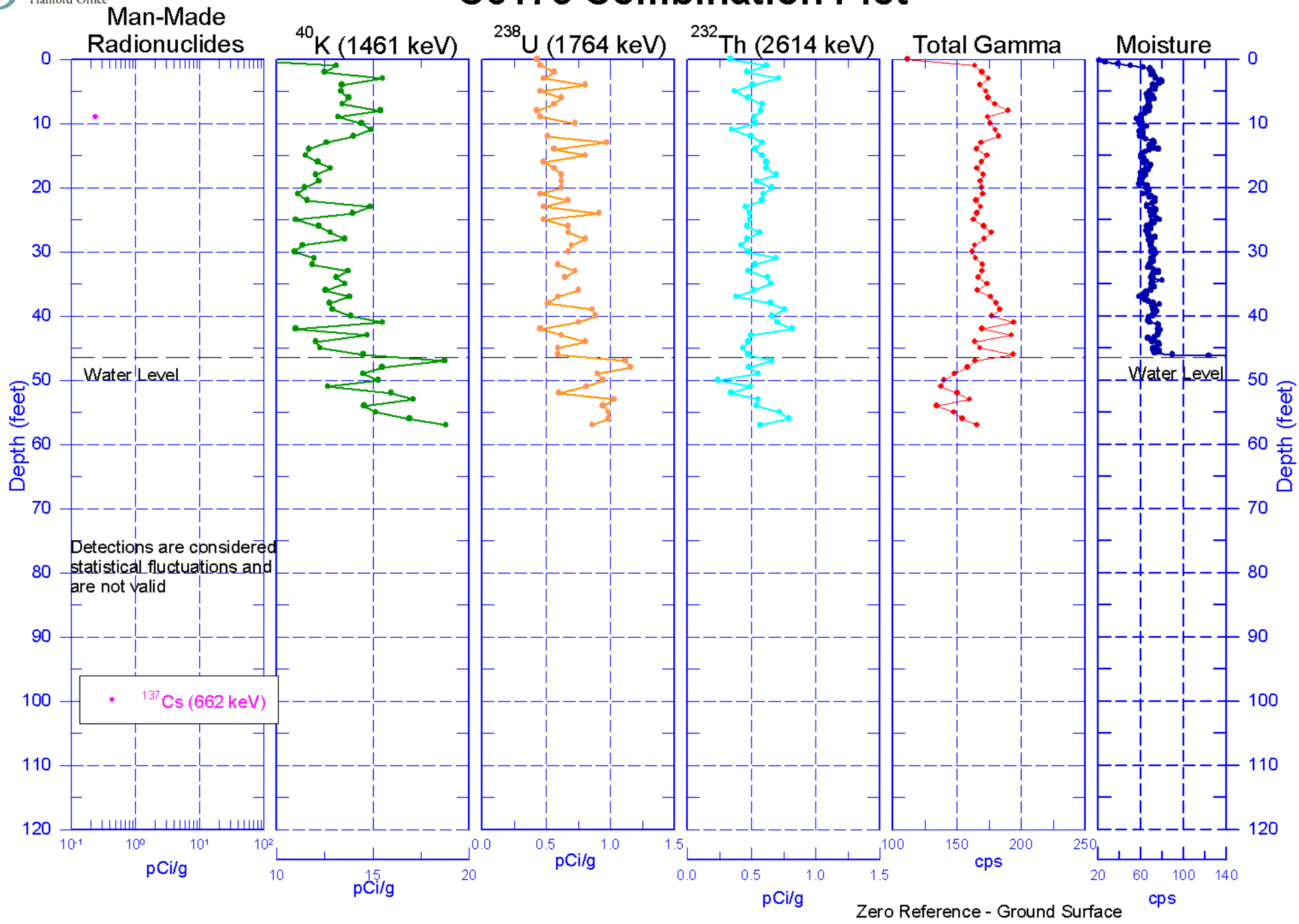
C6173 Combination Plot



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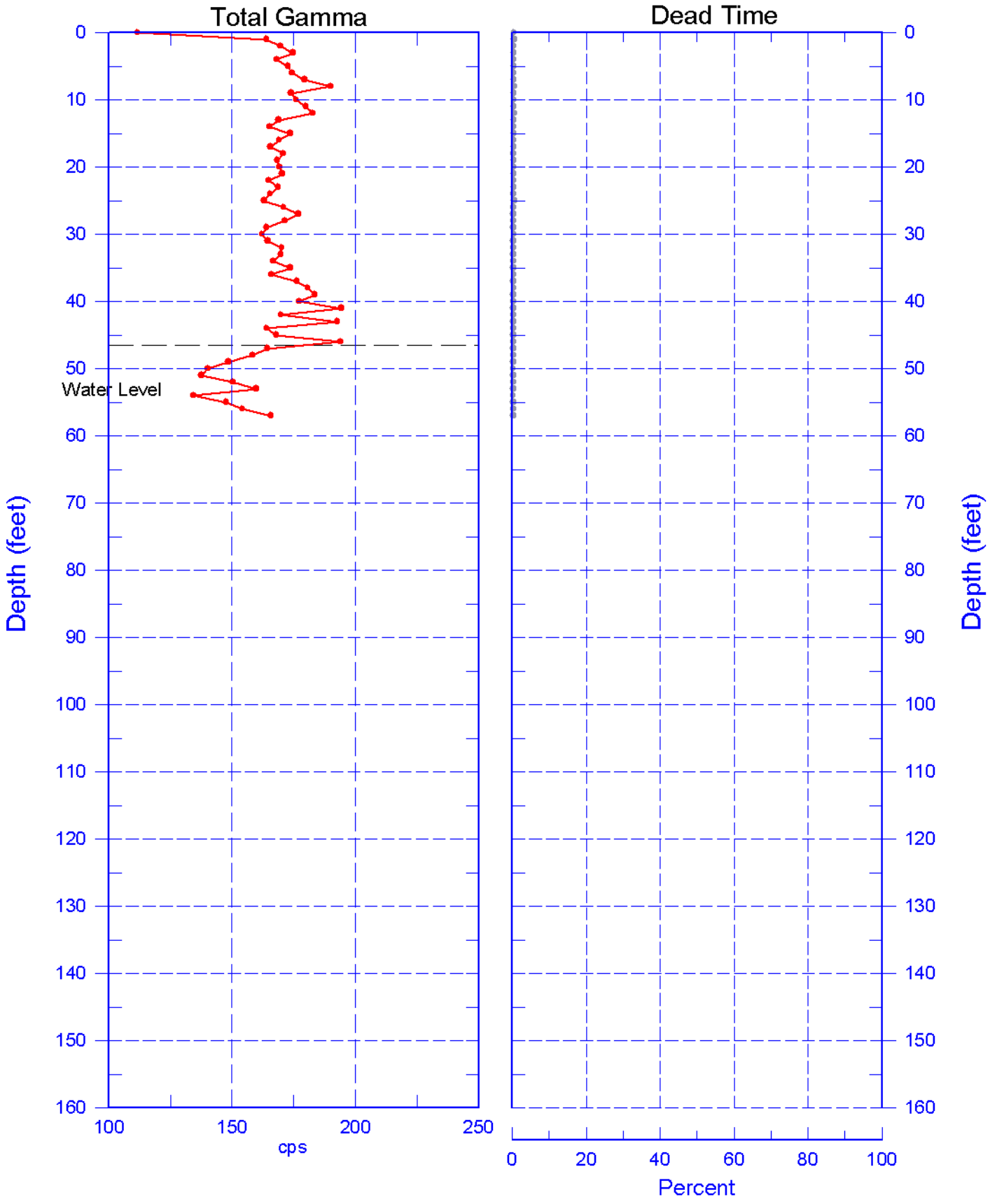
Total Gamma & Dead Time



Reference - Ground Surface

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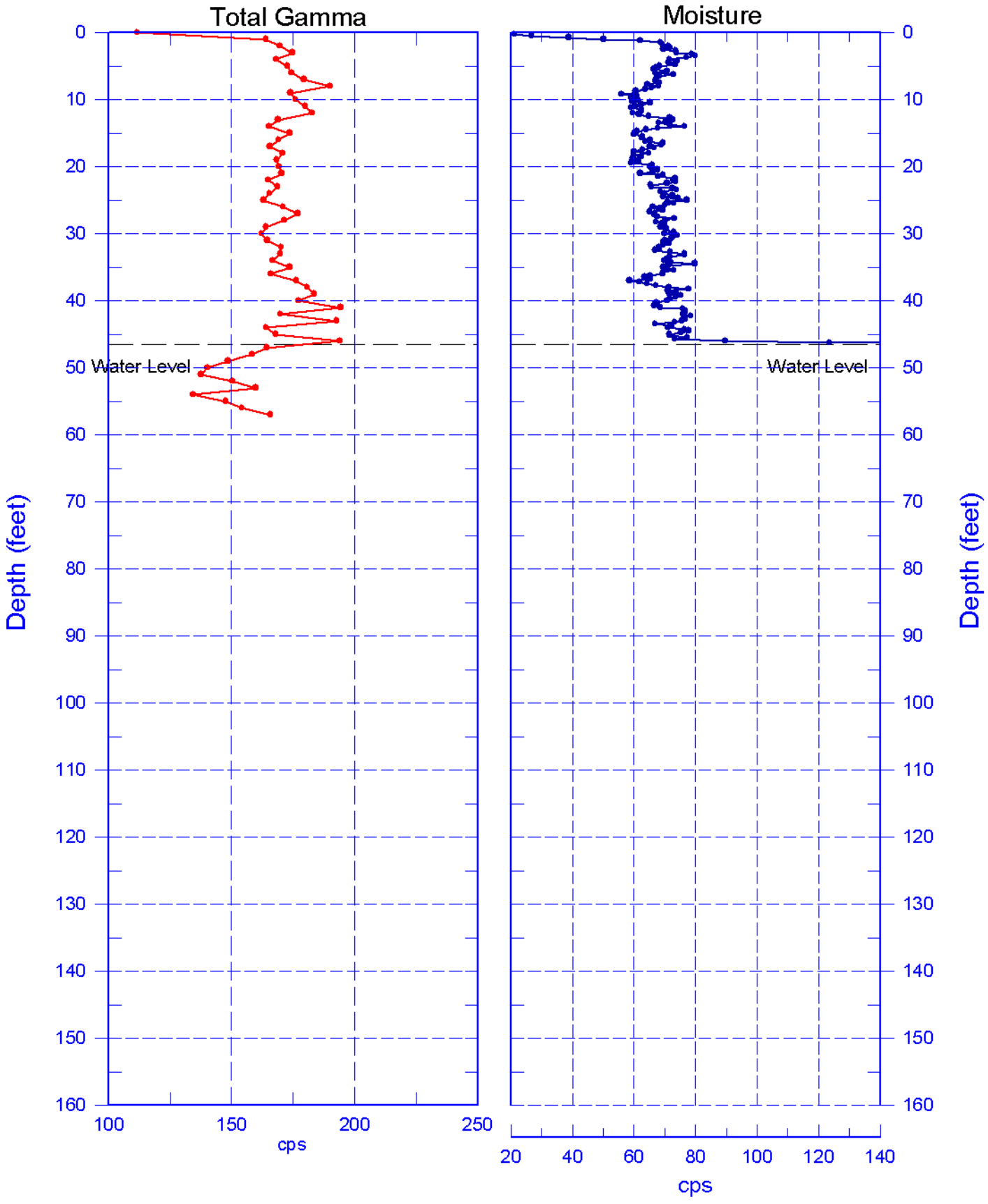
C6173
Total Gamma & Moisture



Reference - Ground Surface

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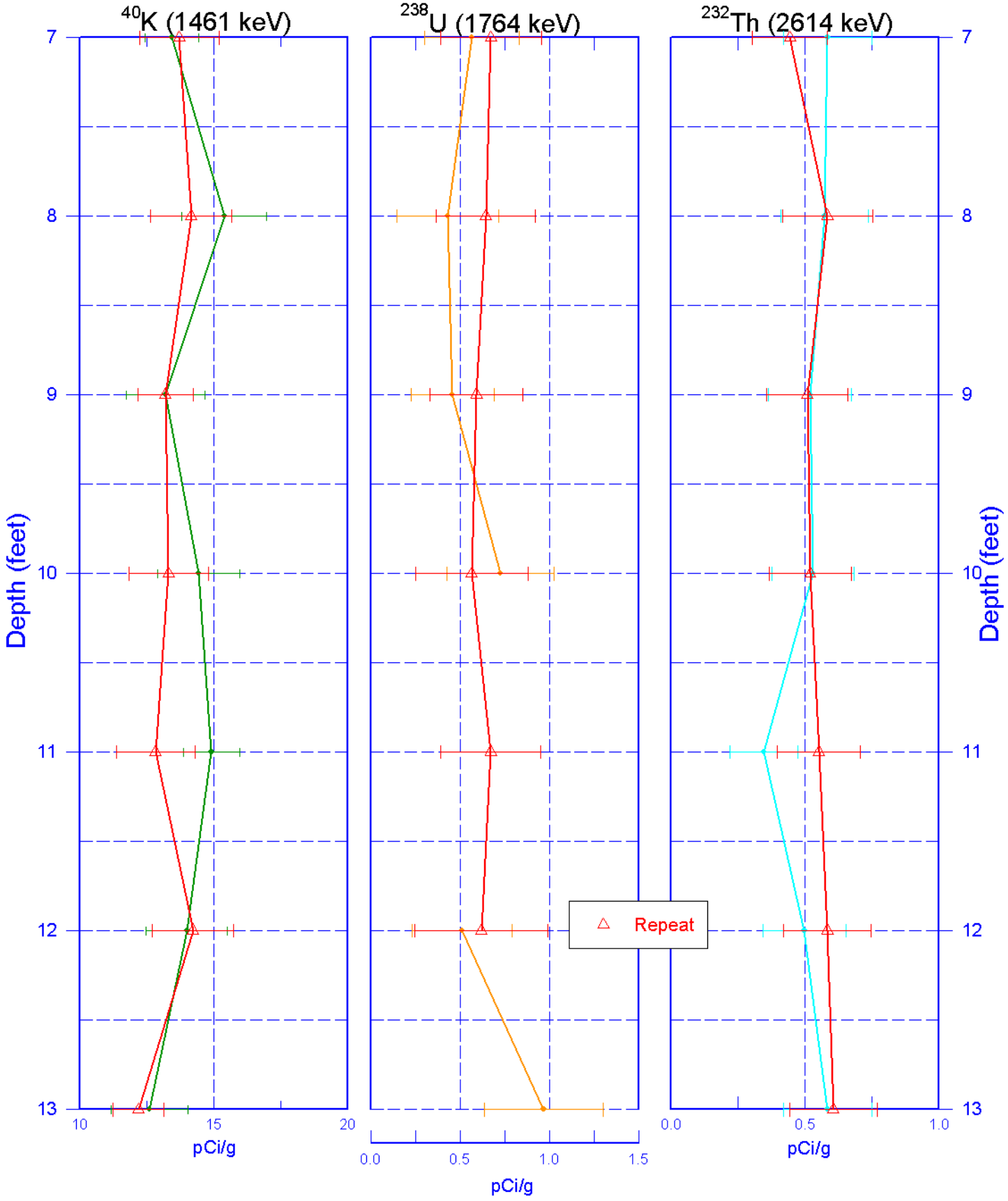
Repeat Section of Natural Gamma Logs



Zero Reference - Ground Surface

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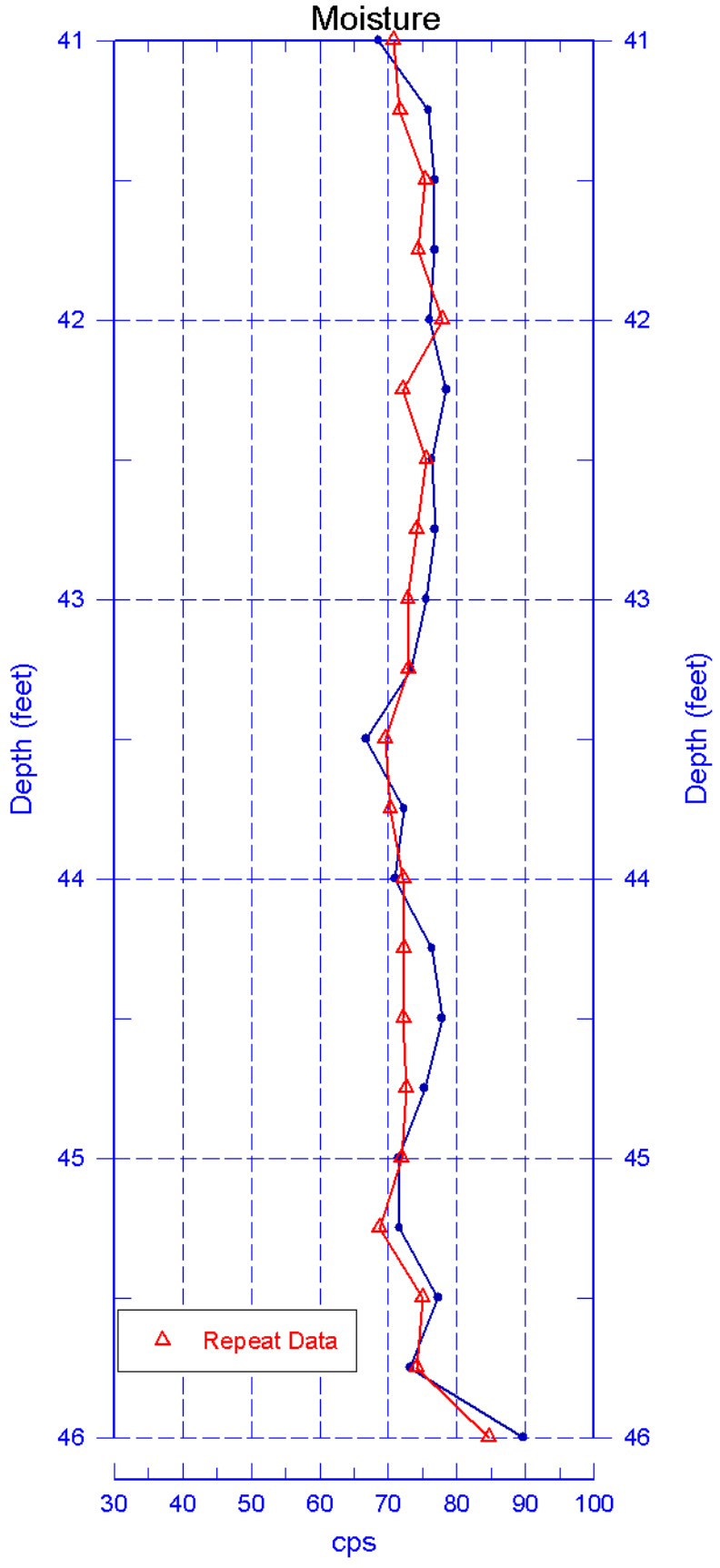
Moisture Repeat Section



Reference - Ground Surface